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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,621	07/03/2001	Stephen Weinhold	71363	2318

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EXAMINER

WYROZEBSKI LEE, KATARZYNA I

ART UNIT PAPER NUMBER

1714

DATE MAILED: 08/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/898,621		WEINHOLD ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Katarzyna Wyrozebski Lee		1714	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**P riod for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                     | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                            | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>0703</u> . | 6) <input type="checkbox"/> Other:  |

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 contains limitation of UV absorbing compound providing less than about 20 % transmittance of UV light. Term "less than about" renders claims indefinite, since it is not clear if the transmittance is less than 20% or about 20%.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-8, 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (US 5,925,710).

The prior art of WU discloses polyester composition comprising compounds capable of absorbing IR radiation, such as graphite. The polyester of the prior art of WO is utilized in making bottles through making a pre-form and then reheating and blow molding into a bottle (Abstract).

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The polyester is formed by the reaction of diester or diacid with diol. In preferred embodiment, the diester or diacid component is at least in 95 mole % terephthalic acid and diol component is at least 95 mole percent ethylene glycol (col. 4, lines 13-25). In one of the preferred embodiments, the diol component comprises modifying co-monomers preferably diethylene glycol or 1,4-cyclohexane dimethanol or mixture of the two (col. 4, lines 39-42). Example in col. 7, discloses 1.4 % by weight of diethylene glycol, therefore if the two components are utilized together it would have been obvious to one having ordinary skill in the art to utilize them in the same amounts as required by present claim.

The IR absorbing component is graphite and it is utilized in amount of 3-60 ppm based on the weight of the resin (col. 3, lines 66-67). The prior art of WU also discloses that other suitable metals for performing the same function as graphite include antimony, tin, silver, gold, palladium, platinum, however, these are not utilized since they are either too expensive or environmentally hazardous. Further the prior art of WU discloses that more desired metals include antimony (col. 2, lines 5-13). The prior art of WU therefore, by saying that they are also suitable for use, does not teach away from the use of antimony.

Per figures included in the prior art of WU, the addition of graphite to the polyester decreased the reheat temperatures from temperatures as high as 115°C to as low as 100 and 95°C. This is approximately 14-18% difference in reheat properties.

With respect to the viscosity of the polyester utilized in the prior art of WU, it is reasonable to expect that it will be encompassed by the viscosity of the present invention for following reasons: In the polyester formed by the prior art of WU, the mole percentage of the co-monomers utilized is encompassed by the allowed amount of the co-monomers in the present

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invention. Also, Table 1 even discloses about 1.5 % of DEG present. The temperatures at which the polyester melts in both prior art and present invention are within the same range, which would further suggest, that the molecular weights of the polyesters in both disclosures are also within the same. Since mole percentage of the co-monomers and molecular weight would directly encompass the viscosity of the polymeric component, in the instant case, they would overlap.

Use of the additives such as graphite and antimony, which are black, reheat aids lower the temperature at which perform can be blow molded into a bottle or other container.

In the light of the above disclosure, it would have been obvious to one having ordinary skill in the art at the time of the instant invention to utilize the disclosure of the prior art of WU and arrive at the present invention. The composition of the prior art of WU arrives at a polyester for bottles or containers, which has lower reheat temperatures.

7. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over WU (US 5,925,710) as applied to claims 1-8, 16-20 above, and further in view of Tindale (US 5,419,936).

The discussion of the disclosure of the prior art of WU from paragraph 6 of this office action is incorporated here by reference.

In the event that the applicant traverse examiner's position, that it would have been obvious to utilize antimony as IR absorbing agent in the composition of WU following rejection discloses prior art that actually utilizes antimony.

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The prior art of Tindale discloses also a polyester composition for making a containers, which composition comprises IR absorbing metal that further reduces the reheat time of the perform (Abstract).

The reheat aids utilized with the polyester composition of TINDALE include silver, gold, palladium, platinum, tin or antimony with antimony being preferred (col. 2, lines 42-50). In fact, according to claim 4 of the prior art of TINDALE, the metallic reheat aid is utilized in the same amounts as the graphite of WU.

Utilizing metallic components such as silver, gold, palladium, platinum, tin or antimony, would result in polyester having improved reheat values. In addition, it is well settled that it is prima facie obvious to combine two ingredients, each of which is targeted by the prior art to be useful for the same purpose. *In re Linder* 457 F.2d 506,509, 173 USPQ 356, 359 (CCPA 1972).

In the light of the above disclosure, it would have been obvious to one having ordinary skill in the art having read and understood the prior art disclosures, to utilize reheat aids such as antimony with the polyester of WU and thereby arrive at the present invention. Utilizing antimony would still provide composition having improved reheat properties, which is a goal of both prior art disclosures.

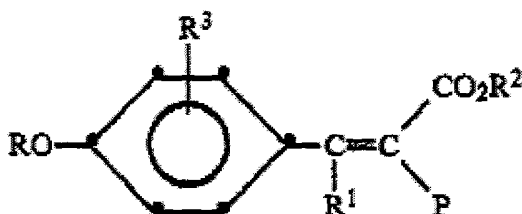
8. Claims 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over WU (US 5,925,710) or WU (US 5,925,710) in view of Tindale (US 5,419,936) as applied to claims 1-8, 16-20 above, either one of which further in view of Pruett (US 4,617,374).

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The discussion of the disclosure of the prior art of WU from paragraph 6 and WU in view of TINDALE from paragraph 7 of this office action is incorporated here by reference.

The difference between the present invention and the disclosure of the prior art of WU or WU in view of TINDALE is addition of the UV absorbing compound.

With respect to the above disclosure, the prior art of Pruett discloses composition for polyester bottles or containers comprising UV-absorbing compound (Abstract).



wherein:

$R$  is hydrogen, alkyl, substituted alkyl, aryl, substituted aryl, cycloalkyl, substituted cycloalkyl, or alkenyl;

$R^1$  is hydrogen, or alkyl, aryl, or cycloalkyl, all of which may be substituted;

$R^2$  is hydrogen, or alkyl, cycloalkyl or aryl, all of which may be substituted;

$R^3$  is hydrogen or 1-3 substituents; and

$P$  is cyano or a group such as carbamoyl, aryl, alkylsulfonyl, arylsulfonyl, alkanoyl or aroyl, all of which groups may be substituted;

whereby the polyester composition has maximum light radiation absorbance within the range of from about 320 nm to about 380 nm.

The above formula is exactly the formula recited in claim 10 of the present invention.



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The polyester component of the prior art of PRUETT is polyethylene terephthalate or its copolymer with poly(1,4-cyclohexylene dimethylene terephthalate) (col. 1, lines 60-65 and claim 9).

According to claim 1 of the prior art of PRUETT the UV absorber is utilized in an amount of 1.0-5000.00 ppm by the weight of the polyester. In narrower embodiment, UV absorber is utilized in amount of 2-1500 ppm (col. 1, lines 35-36).

UV-absorber of the prior art of PRUETT will eliminate UV light degradation of the product packaged in the container and at the same time will absorb harmful radiation thereby bringing stability to the to both polyester and any dye present in the composition.

In the light of the above disclosure it would have been obvious to one having ordinary skill in the art at the time of the instant invention to utilize the UV absorber of PRUETT in the composition of WU and thereby obtain the claimed invention. Addition of the UV absorber would eliminate UV light degradation of the product packaged without inhibiting its reheat properties.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski Lee whose telephone number is (703) 306-5875. The examiner can normally be reached on Mon-Thurs 6:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone numbers for

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the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

*Kataryna Wyrubski*  
KIWL  
July 29, 2003